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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/606,382

06/26/2003

Gab Jae Lee

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EXAMINER

PHAM, VAN T

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/606,382	LEE, GAB JAE	
	<b>Examiner</b>	<b>Art Unit</b>	
	VAN T. PHAM	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Arguments***

1. Applicant's arguments filed 3/16/2006 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "Unlike Masaki, the control value of the present invention is increased until the driving signal generator starts to generate the driving voltage" (see Remarks page 10)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's argument that "Masaki's EP current DAC register value is set to correspond to the measurement power, not correspond to the driving voltage of the driving signal generator. Therefore, Masaki fails to disclose "checking whether a driving voltage is generated by the driving signal generator based on the increases control value" (see Remarks page 10)". Masaki discloses in Fig. 4, and col. 15, lines 24-46 The APC 138 controls the reading power current source 104 so as to always maintain the target reading power irrespective of the value of the light emitting power, thereby realizing an automatic power control of the specified erasing power, first writing power, and second writing power, with respect to the subtraction current as well, a subtraction current source circuit is constructed by a register, a DCA, and a constant current source. A monitor voltage by the monitor voltage detecting resistor 118 corresponding to the monitor current  $i_m$  is converted into digital data by an A/D inputted to a monitor ADC register 134.

Applicant asserted: Applicant's Disclosure in Fig. 2 merely discloses that the offset value is set where the pickup unit *starts to output the laser power*, not where "the driving signal generator *starts to generate the driving voltage*" (see the admitted art discloses in [0005]-[0009] Figs. 1-2).

Claim 9 was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, but after amended of claims, claim 9 still have a 112 first problem (see rejection below).

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 9 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There is inadequate disclosure of how to make and use the invention of claim 9. The disclosure does not explain or disclose how to derive the equation in claim 9 "the control value for generating the desired optical power in the step (d2) is calculated by the following equation:  $4 \text{ DAC DSL} = \text{DAC offset} + \text{DSL DSL 1} \cdot (\text{DAC 1} - \text{DAC offset})$ , where DSL is the desired optical power, DAC.sub.DSL is the control value for generating desired optical power,

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DAC.sub.offset is the offset value, DAC.sub.1 is the predetermined control value, and DSL.sub.1 is the measured optical power corresponding to DAC.sub.1.”. There are no guidelines as to calculate control value for generating the specific driving signal level. Hence there would be undue experimentation for one of skill in the art to make and use the invention.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masaki et al. (US 5,732,055) in view of the admitted art.

Regarding claim 1, see Masaki discloses a method for controlling an optical power level, comprising the steps of: a) increasing a control value of a driving signal generator for driving a pickup unit (see Fig. 3 (78)) to output an optical power (see Figs. 11, 12 and col. 19, line 34- col. 20, line 26); b) checking whether a driving voltage is generated by the driving signal generator based on the increased control value (see Figs. 12, 41B, col. 32 lines 9-33, col. 15, lines 24-46). However, Masaki does not disclose a step of setting the increased control value at which the driving signal generator starts to generate the driving signal voltage as an offset value for setting up a desired optical power of the pickup unit, but Masaki does disclose a writing power adjusting unit increases an offset to be added to the recording limit power (see col. 8, lines 44-61).

The admitted art, see [0005]-[0009] and Figs. 1-2, disclose a step of setting the increased control value at which the driving signal generator starts to generate the driving voltage as an offset value for setting up a desired optical power of the optical pickup.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a step of setting the increased control value in Masaki as suggested by the admitted art, the motivation being in order to calculate the DAC offset value by a linear equation (see the admitted art [0010]).

Regarding claim 2, the combination of Masaki and the admitted art, discloses a method as set forth in claim 1, wherein the driving voltage of the driving signal generator is applied to a laser diode of the pickup unit, and a magnitude of the optical power is determined by a level of the driving voltage (see Masaki Fig. 11, col. 4, lines 30-61, and the admitted art Fig. 2).

Regarding claim 3, the combination of Masaki and the admitted art, discloses the method as set forth in claim 1, wherein the offset value is stored in a nonvolatile memory (see the offset value of Fig. 2 in the admitted art and Figs. 4 and 7 in Masaki).

Regarding claim 4, the combination of Masaki and the admitted art, discloses the method as set forth in claim 1, wherein the offset value is determined when an optical disc apparatus is initially driven (see Fig. 2 of the admitted art, the rDACoffset starts when the power  $P=0$ ).

Regarding claim 5, the combination of Masaki and the admitted art, discloses the method as set forth in claim 1, wherein the step (c) includes the steps of: c1) determining the control value at which the driving voltage of the driving signal generator reaches a predetermined voltage level (see Masaki Fig. 7B (206)); and c2) subtracting a predetermined value from the

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determined control value, and setting the subtracted result value as the offset value (see equations 1 in the admitted art and [0009] and in Masaki Fig. 4 (128, 130, 132), abstract).

Regarding claim 6, the combination of Masaki and the admitted art, discloses the method as set forth in claim 5, wherein the predetermined voltage level is within a threshold area of the driving voltage of the driving signal generator (see Masaki col. 8, lines 18-35).

Regarding claim 7, the combination of Masaki and the admitted art, discloses the method as set forth in claim 1, further comprising the step of: d) calculating a control value for generating the desired optical power of the pickup unit based on the offset value (see equations 1,2 of the admitted art and Figs. 2,3).

Regarding claim 8, see rejection above of claim 5 and Fig. 1, discloses the method as set forth in claim 7, wherein the step (d) includes the steps of: d1) applying a predetermined control value and measuring corresponding optical power of the pickup unit; and d2) calculating the control value for generating the desired optical power based on the predetermined control value, the measured optical power corresponding to the predetermined control value, and the offset value (see Masaki abstract and Figs. 7, 10, col. 17, lines 24-38, line 64 – col. 8, line 5 and col. 19, lines 10-33).

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Allowable Subject Matter*

7. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 10 is allowable over prior art of record since it does not disclose or suggest all the limitations of claims 1, 7 as well as the limitation that the control value for generating the desired optical power is previously stored in a nonvolatile memory in the form of a difference between the control value and an offset value for setting up an the desired optical power.

Claims 11-12 are allowed with their parent claim 10.

Claim 13 is allowed.

*Cited References*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. A light emission adjustment processing unit of a laser diode sequentially instructs a D/A converter for light emission of a light emission by test powers at two predetermined two points (Masaki US 5,732,055).



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- b. The cited references relate to pickup control method and apparatus, and disk unit with gain control during power save mode (Ikeda US 5,715,218).
  - c. Calibration of the write signal power level applied to a transducer for making a moving media (Call et al. US 5,268,893).
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Van Pham whose telephone number is 571-272-7590. The examiner can normally be reached on Monday-Thursday from 9:00am – 600pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP



**WAYNE YOUNG**  
**SUPERVISORY PATENT EXAMINER**